Contents to volume 235

Review Letter

Stop making sense: or Regulation at the level of termination in eukaryotic protein synthesis (FEB 06102) *R.P.C. Valle, M.-D. Morch* 1

Discusion Letter

A novel superfamily of nucleoside triphosphate-binding motif containing proteins which are probably involved in duplex unwinding in DNA and RNA replication and recombination (FEB 06091) *A.E. Gorbalenya, E.V. Koonin, A.P. Donchenko, V.M. Blinov* 16

Research Letters

Phenotypic changes in 3T3 cells associated with the change of sphingolipid synthesis by a ceramide analog, 2-decanoylamino-3-morpholino-1-phenylpropanol (compound RV538) (FEB 06050) *Y. Okada, N.S. Radin, S. Hakomori* 25

Comparative study on the evolution of chloroplast ribosomal 5 S RNA of a living fossil plant, *Cycas revoluta* Thunb (FEB 06122) *X. Zhou, W. Liu, M. Wang* 30

An improved purification of lactose permease (FEB 06095) *K. Dornmair* 35

Characterization of an invertebrate nicotinic acetylcholine receptor gene: the *ard* gene of *Drosophila melanogaster (FEB 06089) E. Sawruk, I. Hermans-Borgmeyer, H. Betz, E.D. Gundelfinger* 40

Isolation of pterocarpan synthase, the terminal enzyme of pterocarpan phytoalexin biosynthesis in cell suspension cultures of *Cicer arietinum (FEB 06115) W. Bleß, W. Barz* 47

Zn^{2+} enhances protein tyrosine kinase activity of human platelet membranes (FEB 06114) *D. Findik, P. Presek* 51

Excitation-contraction coupling in skeletal muscle fibers injected with the $InsP_3$ blocker, heparin (FEB 06106) *P.C. Pape, M. Konishi, S.M. Baylor, A.P. Somlyo* 57

Heme-linked ionization and ligand binding produce identical changes of proximal heme stereochemistry in reduced horseradish peroxidase: Evidence for existence of two protein conformations (FEB 06121) *Yu.A. Sharonov, V.F. Pismensky, E.G. Yarmola* 63

Leukotriene B_4 increases the lymphocyte binding to endothelial cells (FEB 06111) *R. Renkonen, P. Mattila, D. Leszczynski, P. Häyry* 67

Bicarbonate binding and the properties of photosystem II electron acceptors (FEB 06117) *J.H.A. Nugent, A.R. Corrie, C. Demetriou, M.C.W. Evans, C.J. Lockett* 71

Measurement of the redox state of the ubiquinone pool in plant mitochondria (FEB 06105) *A.L. Moore, I.B. Dry, J.T. Wiskich* 76

NMR-invisible lactate in blood plasma (FEB 06112) *J.D. Bell, J.C.C. Brown, G. Kubal, P.J. Sadler* 81

Proton nuclear magnetic resonance study of the ferrous derivatives of the dimeric and tetrameric hemoglobin from the mollusc *Scapharca inaequivalvis (FEB 06107) T. Inubushi, T. Yonetani, E. Chiancone* 87

^{14}N-coordination to VO^{2+} in reduced vanadium bromoperoxidase, an electron spin echo study (FEB 06067) *E. de Boer, C.P. Keijzers, A.A.K. Klaassen, E.J. Reijerse, D. Collison, C.D. Garner, R. Wever* 93

Cross-linking of collagen CNBr peptides by ozone or UV light (FEB 06128) *E. Fujimori* 98

Rapid transducin deactivation in intact stacks of bovine rod outer segment disks as studied by light scattering techniques: Arrestin requires additional soluble proteins for rapid quenching of rhodopsin catalytic activity (FEB 06113) *R. Wagner, N. Ryba, R. Uhl* 103

Published by Elsevier Science Publishers B.V. (Biomedical Division)
00145793/88/$3.50 © 1988 Federation of European Biochemical Societies

Contents to volume 235

Review Letter

Stop making sense: or Regulation at the level of termination in eukaryotic protein synthesis (FEB 06102) *R.P.C. Valle, M.-D. Morch* 1

Discusion Letter

A novel superfamily of nucleoside triphosphate-binding motif containing proteins which are probably involved in duplex unwinding in DNA and RNA replication and recombination (FEB 06091) *A.E. Gorbalenya, E.V. Koonin, A.P. Donchenko, V.M. Blinov* 16

Research Letters

Phenotypic changes in 3T3 cells associated with the change of sphingolipid synthesis by a ceramide analog, 2-decanoylamino-3-morpholino-1-phenylpropanol (compound RV538) (FEB 06050) *Y. Okada, N.S. Radin, S. Hakomori* 25

Comparative study on the evolution of chloroplast ribosomal 5 S RNA of a living fossil plant, *Cycas revoluta* Thunb (FEB 06122) *X. Zhou, W. Liu, M. Wang* 30

An improved purification of lactose permease (FEB 06095) *K. Dornmair* 35

Characterization of an invertebrate nicotinic acetylcholine receptor gene: the *ard* gene of *Drosophila melanogaster (FEB 06089) E. Sawruk, I. Hermans-Borgmeyer, H. Betz, E.D. Gundelfinger* 40

Isolation of pterocarpan synthase, the terminal enzyme of pterocarpan phytoalexin biosynthesis in cell suspension cultures of *Cicer arietinum (FEB 06115) W. Bleß, W. Barz* 47

Zn^{2+} enhances protein tyrosine kinase activity of human platelet membranes (FEB 06114) *D. Findik, P. Presek* 51

Excitation-contraction coupling in skeletal muscle fibers injected with the $InsP_3$ blocker, heparin (FEB 06106) *P.C. Pape, M. Konishi, S.M. Baylor, A.P. Somlyo* 57

Heme-linked ionization and ligand binding produce identical changes of proximal heme stereochemistry in reduced horseradish peroxidase: Evidence for existence of two protein conformations (FEB 06121) *Yu.A. Sharonov, V.F. Pismensky, E.G. Yarmola* 63

Leukotriene B_4 increases the lymphocyte binding to endothelial cells (FEB 06111) *R. Renkonen, P. Mattila, D. Leszczynski, P. Häyry* 67

Bicarbonate binding and the properties of photosystem II electron acceptors (FEB 06117) *J.H.A. Nugent, A.R. Corrie, C. Demetriou, M.C.W. Evans, C.J. Lockett* 71

Measurement of the redox state of the ubiquinone pool in plant mitochondria (FEB 06105) *A.L. Moore, I.B. Dry, J.T. Wiskich* 76

NMR-invisible lactate in blood plasma (FEB 06112) *J.D. Bell, J.C.C. Brown, G. Kubal, P.J. Sadler* 81

Proton nuclear magnetic resonance study of the ferrous derivatives of the dimeric and tetrameric hemoglobin from the mollusc *Scapharca inaequivalvis (FEB 06107) T. Inubushi, T. Yonetani, E. Chiancone* 87

^{14}N-coordination to VO^{2+} in reduced vanadium bromoperoxidase, an electron spin echo study (FEB 06067) *E. de Boer, C.P. Keijzers, A.A.K. Klaassen, E.J. Reijerse, D. Collison, C.D. Garner, R. Wever* 93

Cross-linking of collagen CNBr peptides by ozone or UV light (FEB 06128) *E. Fujimori* 98

Rapid transducin deactivation in intact stacks of bovine rod outer segment disks as studied by light scattering techniques: Arrestin requires additional soluble proteins for rapid quenching of rhodopsin catalytic activity (FEB 06113) *R. Wagner, N. Ryba, R. Uhl* 103

Published by Elsevier Science Publishers B.V. (Biomedical Division)
00145793/88/$3.50 © 1988 Federation of European Biochemical Societies

Characterisation of the D1 protein in a photosystem II mutant (LF-1) of *Scenedesmus obliquus* blocked on the oxidising side: Evidence supporting non-processing of D1 as the cause of the lesion (FEB 06119) *M.A. Taylor, P.J. Nixon, C.M. Todd, J. Barber, J.R. Bowyer* 109

Purification, composition and Ca^{2+}-binding properties of the monomeric protein of the S-layer of *Thermus thermophilus* (FEB 06130) *M.L.M. Faraldo, M.A. de Pedro, J. Berenguer* 117

Uranyl salts as photochemical agents for cleavage of DNA and probing of protein-DNA contacts (FEB 06143) *P.E. Nielsen, C. Jeppesen, O. Buchardt* 122

Monensin inhibits the expression of sucrase-isomaltase in Caco-2 cells at the mRNA level (FEB 06126) *I. Chantret, G. Trugnan, E. Dussaulx, A. Zweibaum, M. Rousset* 125

Tyrosine sulfation is not the last modification of entactin before its secretion from 3T3-L1 adipocytes (FEB 06129) *Y. Aratani, Y. Kitagawa* 129

P2-purinoceptor-stimulated phosphoinositide turnover in chick myotubes: Calcium mobilization and the role of guanyl nucleotide-binding proteins (FEB 06138) *J. Häggblad, E. Heilbronn* 133

Bradykinin activates tyrosine hydroxylase in rat pheochromocytoma PC-12 cells (FEB 06140) *H. Houchi, J.M. Masserano, N. Weiner* 139

Nerve growth factor induces rapid redistribution of F-actin in PC12 cells (FEB 06131) *H. Paves, T. Neuman, M. Metsis, M. Saarma* 141

Negative interactions between phosphorylation of acetyl-CoA carboxylase by the cyclic AMP-dependent and AMP-activated protein kinases (FEB 06123) *M.R. Munday, D. Carling, D.G. Hardie* 144

Phosphorylation of brush border myosin at threonine on its 20 kDa light chains by a calmodulin-independent kinase activates its ATPase (FEB 06139) *C. Borysenko, J.P. Rieker, H. Swanljung-Collins, J. Montibeller, J.H. Collins* 149

Three fast myosin heavy chains in adult rat skeletal muscle (FEB 06125) *A. Bär, D. Pette* 153

Phencyclidine and some of its analogues have distinct effects on NMDA receptors of rat hippocampal neurons (FEB 06051) *A.S. Ramoa, E.X. Albuquerque* 156

Mobility and solvent exposure of aromatic residues in bacteriorhodopsin investigated by ^{1}H-NMR and photo-CIDNP-NMR spectroscopy (FEB 06118) *K.H. Mayo, A. Schussheim, G.W. Vuister, R. Boelens, R. Kaptein, M. Engelhard, B. Hess* 163

Energy transfer from carotenoid to bacteriochlorophyll *a* in the B800-820 antenna complexes from *Rhodopseudomonas acidophila* strain 7050 (FEB 06120) *T. Gillbro, R.J. Cogdell, V. Sundström* 169

Mitochondrial targeting sequences: Why 'non-amphiphilic' peptides may still be amphiphilic (FEB 06137) *Y. Gavel, L. Nilsson, G. von Heijne* 173

ω-Conotoxin binding and effects on calcium channel function in human neuroblastoma and rat pheochromocytoma cell lines (FEB 06144) *E. Sher, A. Pandiella, F. Clementi* 178

Simple graphical methods for use with complex ligand-binding and enzyme mechanisms (FEB 06141) *M.J.C. Crabbe* 183

Identification of a cysteine residue as the binding site for the dipyrromethane cofactor at the active site of *Escherichia coli* porphobilinogen deaminase (FEB 06142) *P.M. Jordan, M.J. Warren, H.J. Williams, N.J. Stolowich, C.A. Roessner, S.K. Grant, A.I. Scott* 189

Pyrroloquinoline quinone (PQQ) is the organic cofactor in soybean lipoxygenase-1 (FEB 06135) *R.A. van der Meer, J.A. Duine* 194

In situ binding of a photo-affinity GTP analog to synaptic membrane G-proteins: Distribution of bound GTP analog reflects the status of adenylate cyclase (FEB 06127) *J.H. Gordon, M.M. Rasenick* 201

Ongoing protein synthesis needed for 1,25-$(OH)_2D_3$-mediated rapid increase of cyclic GMP in human skin fibroblasts (FEB 06133) *J. Barsony, S.J. Marx* 207

The hydrolysis of ATP that accompanies actin polymerization is essentially irreversible (FEB 06134) *M.-F. Carlier, D. Pantaloni, J.A. Evans, P.K. Lambooy, E.D. Korn, M.R. Webb* 211

Stereotaxic injection of kainic acid into the striatum of rats induces synthesis of mRNA for heat shock protein 70 (FEB 06145) *J.B. Uney, P.N. Leigh, C.D. Marsden, A. Lees, B.H. Anderton* 215

Isolation of the calmodulin-dependent protein kinase system from rabbit skeletal muscle sarcoplasmic reticulum (FEB 06132) *B.S. Tuana, D.H. MacLennan* 219

Carrier-mediated uptake of L-(+)-lactate in plasma membrane vesicles from rat liver (FEB 06136) *I. Quintana, A. Felipe, X. Remesar, M. Pastor-Anglada* 224

Effect of exogenously added acylphosphatases on inositol lipid metabolism in human platelets (FEB 06157) *A. Berti, M. Stefani, D. Degl'Innocenti, M. Ruggiero, V. Chiarugi, G. Ramponi* 229

Differences in the organization of adenovirus E1A promoters are not important for their full activity (FEB 06152) *J.P.G. Leite, J.-C. D'Halluin* 233

^{1}H-NMR investigation of the interaction between RNase T_1 and a novel substrate analog, 2'-deoxy-2'-fluoroguanylyl-(3'-5')uridine (FEB 06151) *Y. Shibata, I. Shimada, M. Ikehara, T. Miyazawa, F. Inagaki* 237

*Asn*I: a novel class II restriction endonuclease from *Arthrobacter* sp., strain N-CM, recognizing 5'-AT/TAAT-3' (FEB 06147) *B.U. Rexer, M. Jarsch, C. Sagmeister, B. Glück, G. Berger, C. Kessler* 241

A rapid purification method for calf thymus casein kinase II (FEB 06160) *R. Zandomeni, M.C. Zandomeni, R. Weinmann* 247

Purification and characterization of phospholipase A_2 inhibitory proteins from pig thyroid gland (FEB 06161) *F. Antonicelli, B. Rothhut, L. Martiny, G. Aguie-Aguie, B. Lambert, G. Bellon, F. Russo-Marie, C. Jacquemin, B. Haye* 252

Primary structure of porcine muscarinic acetylcholine receptor III and antagonist binding studies (FEB 06158) *I. Akiba, T. Kubo, A. Maeda, H. Bujo, J. Nakai, M. Mishina, S. Numa* 257

Complete amino acid sequence of protein B (FEB 06150) *J. Rühlmann, B. Wittmann-Liebold, D. Jürgens, F.J. Fehrenbach* 262

The amino-terminal sequence of the *Xenopus laevis* mitochondrial SSB is homologous to that of the *Escherichia coli* protein (FEB 06153) *C. Mahoungou, R. Ghrir, J.P. Lecaer, B. Mignotte, M. Barat-Gueride* 267

Protein chemical characterization of *Mucor pusillus* aspartic proteinase: Amino acid sequence homology with the other aspartic proteinases, disulfide bond arrangement and site of carbohydrate attachment (FEB 06159) *M. Baudyš, S. Foundling, M. Pavlik, T. Blundell, V. Kostka* 271

Synthesis of diadenosine 5',5'''-P^1,P^4-tetraphosphate by organellar and cytoplasmic phenylalanyl-tRNA synthetases of *Euglena gracilis (FEB 06155)* *R. Krauspe, B. Parthier, C. Wasternack* 275

The antimycin sensitivity of flash-induced ATP synthesis in photosystem I-enriched subchloroplast vesicles (FEB 06156) *F.A. de Wolf, J.M. Galmiche, R. Kraayenhof* 278

Identification of a new gene in the chloroplast genome encoding a low-molecular-mass polypeptide of photosystem II complex (FEB 06154) *N. Murata, M. Miyao, N. Hayashida, T. Hidaka, M. Sugiura* 283

Characterization of low molecular mass proteins of photosystem II by N-terminal sequencing (FEB 06148) *W.P. Schröder, T. Henrysson, H.-E. Åkerlund* 289

Meso-chlorination of chlorophyll *a* in the course of pigment extraction (FEB 06149) *M. Kobayashi, T. Watanabe, A. Struck, H. Scheer* 293

Author Index 298

Table of Contents 302

Notes of Authors 305

FEBS NEWS

FEBS Advanced Courses 1989 307